DRAFT 2/21/02 @ 16:00

Memo

To: ARAC Maintenance Issues Group

From : Sarah

Date:

Re: QA Assignment

Following is a rough, rough outline of the technical report contents. Your assignment is to review only the last page, which is a matrix regarding the pros/cons and cost/benefits of three options for "regulating quality assurance programs."

Technical Report

- Identify QA systems currently used by some repair stations: Committee reviewed current industry quality system elements and matched them to regulatory requirements (see matrix).

- Presented below are the 4 elements that, for the purposes of this technical report, the committee believes are not explicitly required by current regulations.

1. Auditing.

2. Root-cause determination.

3. Corrective action and follow-up.

4. Management review.

Auditing:

- **What:** RS is auditing its operation to ensure that (1) the manual content conforms with the regulations and (2) the operations conform with the manual.
- **How:** Documentation:
    - audit system (methodology, etc.)
        - Should include:
            - ***Audit schedule***: Can be broken into any frequency, provided the entire organization is verified within the applicable interval.
            - ***Auditor selection*** (for internal audits) (Whenever possible, the person performing the audit should not be responsible for those tasks being audited.)
            - ***Audit preparation***: review the regulations and the manual with respect to the area being audited.
            - ***Checklist development:*** On the simplest level, a checklist denotes points to be checked.
            - ***Conducting the audit:*** Gather data to determine compliance or noncompliance with the standard.

Attachment 8

- ***Record of audit:*** Objective evidence that the audit was conducted in accordance with the program and would include the remaining elements (root-cause, corrective and preventative action and follow-up, and management review).

- **Who:** Whoever is identified in the RS audit procedures and evaluates the same items.

The next 3 elements should be performed under 2 instances:

1. After performing an audit.
2. After finding a failure/non-conformity (when you have a QC discrepancy - 145.211(c)(ix)).

Root-cause determination: Timely analysis of the finding to identify the fundamental breakdown or failure of the system that, when resolved, prevents a recurrence of the problem.

a. Resolve the immediate problem in accordance with 145.211(c)(ix),
b. Determine if other products or systems elements are impacted and where other product is.

Corrective Action and Follow-up:

- Timely preparation and implementation of a plan to remove the root cause.
  - Actions (immediate/short/long term)
  - Implementation dates
  - Responsible personnel
- Validation of corrective action.

Management Review:

- The accountable manager is responsible for reviewing audit documentation to ensure that the RS personnel comply with the regulatory requirements. This may include trend analysis of past audit results.

Identify various options for regulating quality assurance programs (the 4 elements) and the advantages and disadvantages of each option.

Provide information on the economic impact of applying the various options to the different segments of the repair station industry

Option	Pro	Con	Economic Impact (broken down between air carrier, part 91, and shop size)	
			Costs	Benefits
Regulate all repair stations under the concepts outlined above				
Regulate only those repair stations working for a 121/125/129/135 with a continuous airworthiness maintenance program				
No regulations, voluntary only				

The cost and benefits can be filled out in 2 ways: Generic information such as cost and benefits will depend on size, location, and complexity of the operation. For the purposes of cost-benefit analysis for this technical report it is assumed that the entire system will be audited once a year. The committee members will attempt to provide specific cost-benefit information on various segments of their membership. The individual company analysis should include (Joe and others will provide specifics for this element) the cost of developing, implementing, and maintaining the system by man hours and type of personnel performing the function.

Recommend (if possible) a preferred quality assurance program/system